

## claims

1. A method for producing a helical synchronous belt for driving carriage, wherein  
5 said helical synchronous belt comprises a back layer, teeth and core cords which are made of a synthetic resin, said method comprising the steps of:  
measuring a thrust force exerted on the helical synchronous belt due to a twist angle  
of the core cord using a strain gauge provided on a driving pulley; and  
determining a helical tooth angle and core cord twist angle based on the  
10 measured thrust force.
2. A helical synchronous belt having its core cords twisted at an angle opposing to the  
angle of helical teeth, with the helical tooth angle set to  $5^{\circ}$  to  $15^{\circ}$  and core cord twist angle set to  $15^{\circ}$  to  
20  $2^{\circ}$ .
3. The helical synchronous belt as described in Claim 2, which has a helical tooth  
15 angle of  $10^{\circ}$ ,  $7^{\circ}$  or  $5^{\circ}$  and core cord twist angle of  $10.2^{\circ}$  or  $4.8^{\circ}$ .
4. The helical synchronous belt as described in Claim 2 or 3, comprising its back  
layer and teeth made of urethane resin and its core cords made of aramid fiber or glass fiber.
5. The helical synchronous belt as described in any one of Claims 2 to 4, which is  
used for driving carriage.

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